Appendix II

GLOSSARY

Airbrake--brake apparatus in which the mechanism is activated by air pressure exerted on various parts of the apparatus.

Airbrake hose--flexible tube made of alternating layers of rubber and canvas used to connect the brake pipes between cars and between the cars and the locomotive in a train.

Alternating current--electric current that reverses its direction at regularly recurring intervals.

Alternator--electric generator for producing current.

Armature--rotating part of an electric motor or generator.

Army Equipment Record Procedures--TM 38-750 which provides procedures for the control of operation and maintenance of all Army equipment. They apply to all units, organizations, and activities under the jurisdiction of the Department of the Army.

Auxiliary generator--device for generating electric power to be used for driving the auxiliary equipment of diesel motive power.

Axle--cylindrical steel or wrought iron shaft on which a pair of wheels is mounted by pressing on with a hydraulic wheel press.

Babbitt metal--alloy consisting mainly of tin and copper used for journal box bearings.

Body bolster--transverse member of the underframe over the truck that transmits the load carried by the longitudinal sills to the truck through the center plates.

Body center plate--metal plate attached to the underside of the body bolster.

Body side bearing--upper one of two side bearings; it is attached to the body bolster. (See Side bearings.)

Brake cylinder--cast iron cylinder attached to a car or locomotive underframe or truck frame that contains the brake piston to which the brake piston rod is attached.

Brake lever--lever used as a part of the foundation brake gear.

Brake pipe--iron pipe connecting the engineer's brake valve on a locomotive with the brake apparatus on all the cars in a train, and connected between adjoining cars by flexible hose couplings.

Brake piston rod--rod attached to the piston in a brake cylinder.

Brakeshoe--piece of metal shaped to fit the tread of a wheel and used to push against the wheel tread to perform the braking action.

Brush--device usually made of carbon or graphite that contacts the commutator of a motor or generator or slip rings of an a. c. motor or alternator to convey electricity to and from the armature or rotor.

Brush holder--metal bracket or support attached to the frame of an electric motor or a generator, but insulated from it, used for holding one or more brushes.

Center plate--one of a pair of plates having circular grooves which fit one into the other and support the car or locomotive on the trucks, which allows them to turn freely under the car. The body or male center plate is attached to the underside of the body bolster or, in cast steel bolsters, an integral part of the casting; the female or truck center plate is attached to the top side of, or cast integral with, the truck bolster.

Center sill--central longitudinal member of a car underframe; the sill that forms the backbone of the underframe.

Commutator--device used to reverse the direction of electric current in any circuit.

Compression ignition--ignition of a fuel charge by heat generated by compressing air in a cylinder.

Coupler--appliance for connecting and disconnecting railway cars and locomotives.

Current--flow of electrical energy in a circuit.

Cylinder--cylindrical chamber in which fuel oil is burned to force the piston down and rotate the crankshaft and thus drive the engine.

Defect--materiel deficiency or malfunction.

Direct current--electric current flowing in one direction continuously as distinguished from alternating current.

Direct support (DS) maintenance--category of maintenance authorized for and performed by designated maintenance activities in direct support of using organizations. This maintenance is limited to the repair of end items or unserviceable assemblies on a return to user basis.

Draft gear--unit that forms the connection between the coupler rigging and center sill of car underframe that disperses coupling shocks and pulling stresses.

Drawbar pull--actual pulling power of a locomotive less the effort necessary to move the locomotive.

Driving axle--axle on which two coupled driving wheels are mounted.

Equipment log--historical records pertaining to the receipt, operation, maintenance, modification, transfer, and disposal of an item of Army equipment.

Field--region where magnetic forces act; also known as magnetic field.

General support (GS) maintenance--category of maintenance authorized for and performed by designated TOE and TD organizations in support of the Army supply system; repair or overhaul of material to required maintenance standards in a ready-to-use condition based upon applicable supported Army area supply requirements.

Generator--machine that transforms mechanical energy into electrical energy.

Governor, engine--device for holding engine speed approximately constant regardless of the load or keeping it from exceeding a predetermined speed within the limits of the engine. This is accomplished by the governor altering the amount of fuel introduced into the cylinder.

Hotbox--overheated journal caused by excessive friction between bearing and journal, lack of lubricant, or foreign matter.

Inspection--instrument by which commanders at all levels can determine the serviceability of equipment and the efficiency of maintenance.

Journal--end of an axle, or that part of an axle on which the journal bearing rests.

Journal bearing--block of metal, usually brass or bronze, in contact with the journal, on which the load rests.

Journal box--metal housing enclosing the journal, bearing, and wedge, which holds oil and packing for lubricating the journal.

Journal box wedge--block of metal or liner used between the top of a journal box and its bearing to hold the bearing in place.

Julian date--method for giving a date showing the year and day of that year; for example, 16 June 1969 is written 9167; 9 is the last digit of the year 1969, 167 is the number of the day counting from the beginning of the calendar year.

Lubrication--use of oil, grease, or other substance between moving parts of machinery for reducing friction, resistance, and heating caused by the motion of the parts in contact.

Lubricator--any device, such as an oil or grease cup, for holding a lubricant and supplying it to wearing surfaces.

Lubricator pad--commercial spring-type pad that supplies lubricant to the journal box bearing. Used instead of waste packing, which see, on most U.S. commercial railroads.

Main reservoir (airbrake)--cylindrical tank in which compressed air is stored for use in the airbrake system.

Materiel readiness--condition of materiel to perform its primary mission.

Piston--metal disk with packing which works back and forth in a cylinder and transmits the force exerted upon its top or crown to a connecting rod and crank.

Piston travel (airbrake)--amount of movement of a piston when forced outward as the brakes are applied.

Preventive maintenance--care and servicing of equipment to maintain it in satisfactory operating condition by providing inspection, detection, and correction of incipient failures either before they occur or before they develop into major defects.

Rotor--rotating field of an alternator or a. c. motor.

Side bearings--bearings or supports attached to body or truck bolsters on each side of the center plates to provide stability and prevent excessive rolling or rocking of the car or locomotive.

Side sill--outside longitudinal member of a car underframe.

Slip ring--brush contact ring of an alternator.

Steam generator--small boiler used to convert water to low-pressure steam for heating a train.

Stringer--floor nailing strip or a steel member which acts as a support for a nailing strip.

Traction motor--electric motor that drives an individual axle of a diesel-electric locomotive

Tractive effort--horizontal force at the rails that the locomotive driving wheels can exert provided they do not slip.

Tread--(See Wheel tread.)

Truck--assembly that supports a car or locomotive at either end and provides for attachment of axles and wheels.

Truck bolster--cross member in the center of a truck on which a car body or locomotive rests. The truck bolster is connected to the body bolster of a car or locomotive by the center plates and a center pin or kingbolt which passes through both plates.

Truck side bearing--lower one of two side bearings; it is attached to the top of the truck bolster. (See Side bearings.)

Underframe--framework that receives buffing and pulling stresses and carries the weight of the floor and body of a rail car; includes all the framing below the floor, the center and side sills, bolsters, crossbearers, and crossties.

Waste packing--threads of wool or cotton saturated with lubricating oil or grease and placed in a journal box to contact the lower half of the journal and lubricate the journal. (See Lubricator pad.)

Wheel flange--projecting rim of the periphery (outer edge) of a wheel for keeping it on the rail.

Wheel tread--exterior cylindrical surface of a wheel next to the flange that comes in contact with the rail.